

2020 Update

Missouri Nutrient Loss Reduction Strategy

The Missouri Nutrient Loss Reduction Strategy (NRLS) adaptive approach reduces nutrient pollution from both point and nonpoint sources. The NRLS recommends actions aimed to improve Missouri's water quality while also reducing nutrients transported downstream to the Gulf of Mexico.

PRIORITY PROGRESS

2018-19 Priorities

Nutrient Monitoring

Program Development and

Implementation. 10 CSR 20-7.015 requires increased monitoring of facilities discharging nutrients, allowing the capture of new information regarding nutrient loading from point sources, as well as the performance of wastewater treatment technology types.

Study to Determine Technology-Based Nutrient Reduction Values.

In an effort to make progress towards the NRLS goal of determining feasible nutrient reduction targets, the department initiated and continues its comprehensive analysis of the environmental and economic impacts of implementing basic and effective nutrient removal technologies for a variety of point source discharges. Coupled with an analysis of nutrient discharge monitoring data, this is the first step in determining and

implementing feasible nutrient reduction targets for point-source dischargers.

State Cost-Share Program.

As of August 2019, agricultural landowners can apply for cost-share to implement denitrifying bioreactors and saturated buffers.

Missouri Nonpoint Source

Management Plan. Missouri's 2020-2025 Nonpoint Source Management Plan prioritizes nutrient loss reduction and promotes projects impacting nutrients in targeted areas.

NRLS Accomplishments of 2018 & 2019

- After an extensive, collaborative process among the department, public and state and federal agencies, Missouri's lakes are protected from excessive nutrient loading following EPA's approval of numeric nutrient criteria.
- Thanks to the Missouri Parks, Soils and Water Sales tax (1/10th of 1%), FY 2019 saw \$36.5 million in tax funds go toward conservation practices on the ground.
- Through the State Cost-Share Program, Missouri landowners covered 286,685 acres (448 square miles) in cover crops in 2019.
- After receiving a grant to monitor edge-of-field conservation practices on commercial row crop

farms, Missouri Corn and Soybean Merchandising Councils found just a few poorly timed spring storms can contribute up to 75% of the annual nutrient and sediment loss from fields. Cover crops during this highly vulnerable period can greatly reduce annual nutrient loss.

- For the first time, source water protection was recognized as a priority objective in the 2018 Farm Bill. USDA dedicated funds to agricultural and livestock producers to protect source water quality, complementing state-level programs already reducing nutrient loss while also protecting drinking water sources.

(continued)

Since 2014, partnerships between landowners and DNR have protected

254 miles
of streams



4,465 acres of
riparian corridors



This is equivalent in size to

12 lanes

of highway between
Kansas City and St. Louis.



Water Quality Trading

Phase One of achieving Water Quality Trading in Missouri was fulfilled by the development and adoption of the department's Water Quality Trading Framework as noted in the NLRS 2018 Update. Phase Two is comprised of a research project to determine how effective agricultural best management practices have been in preventing nutrient loss in Missouri. The department and Environmental Improvement and Energy Resources Authority have engaged a contractor to fulfill this project's objectives. The results of this project will play a critical role in defining the price of nutrient credits for a market-based compliance program with the overall goal of improving water quality by reducing nonpoint source pollution.

Priorities for 2020 & 2021

Implement Numeric Nutrient Criteria for Lakes. Following the approval of Missouri's numeric nutrient criteria for lakes, the department will continue to implement the new regulation through the modeling of watersheds, nutrient antidegradation requirements, permit requirements and water quality assessment.

4R Nutrient Stewardship. The department, with assistance from the MO Fertilizer Control Board, will implement a comprehensive "pilot nutrient management practice" in up to four soil and water districts following the national 4R certification process.

Implement a Statewide Soil Moisture Network. Soil moisture is the water held in the spaces between soil particles. The department will implement a statewide soil moisture network to respond to weather conditions affecting nutrient runoff and/or infiltration.



For More Information:

Missouri Department of Natural Resources

P.O. Box 176, Jefferson City, MO 65102
800-361-4827 or 573-751-3443 office